



CALIFORNIA DEPARTMENT OF  
FOOD & AGRICULTURE

A. G. Kawamura, Secretary

September 12, 2008

Chairman Mike Kerns  
Sonoma County Board of Supervisors  
575 Administration Drive, Room 100A  
Santa Rosa, California 95403-2887

**RE: Light Brown Apple Moth**

Dear Chairman Kerns:

Thank you for the opportunity to present information regarding the Light Brown Apple Moth (LBAM) eradication program in Sonoma County at your July meeting.

Several technical questions were raised at the presentation. The CDFA, along with several other state and federal agencies, have reviewed the questions and are providing you with responses. Additionally, the Q& A will be posted to our website at:  
[www.cdfa.ca.gov/phps/pdep/lbam/factsheets.html](http://www.cdfa.ca.gov/phps/pdep/lbam/factsheets.html).

Also, we have been posting weekly situation reports on our website which highlight survey and diagnostic information, operational updates, trade updates and communications and outreach updates. The website address for these reports is:  
[www.cdfa.ca.gov/phps/pdep/lbam/situationreports.html](http://www.cdfa.ca.gov/phps/pdep/lbam/situationreports.html).

LBAM has a host range in excess of 120 plant genera in over 50 families, including grapes, nursery stock, cut flowers, fruits and vegetables. LBAM could cause an estimated \$160-\$640 million annually in crop and environmental damage and control costs if it spreads to agricultural production areas in the 11 affected counties and up to \$2.4 billion if all of California becomes infested.

Again, thank you for the opportunity to present on this very important issue. Please do not hesitate to contact me or David Pegos in my office with any additional questions, comments or concerns at (916) 654-0321.

Sincerely,

John Connell, Director  
Plant Health and Pest Prevention Services  
California Department of Food and Agriculture

cc: Sonoma County Board of Supervisors



# QUESTIONS AND ANSWERS FROM THE SONOMA BOARD OF SUPERVISORS' MEETING

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## **Q1: Please address the CEQA process.**

**A:** The following summary of the CEQA (California Environmental Quality Act) is from [www.ceres.ca.gov/ceqa](http://www.ceres.ca.gov/ceqa):

"The basic goal of the California Environmental Quality Act (CEQA) ([Pub. Res. Code §21000 et seq.](#)) is to develop and maintain a high-quality environment now and in the future, while the specific goals of CEQA are for California's public agencies to:

- 1) identify the significant environmental effects of their actions; and, either
- 2) avoid those significant environmental effects, where feasible; or
- 3) mitigate those significant environmental effects, where feasible.

CEQA applies to "projects" proposed to be undertaken or requiring approval by State and local government agencies.

After a public agency defines a project, there is a scoping period during which the public is given the opportunity to comment on what they want to see covered in the EIR. After the agency completes their draft EIR, there is a second public comment period. The public agency must respond to all comments in both comment periods.

For the LBAM EIR, the CDFA held seven public scoping sessions throughout the state. For more information, visit the California Department of Food and Agriculture's (CDFA) Light Brown Apple Moth (LBAM) website at: [www.cdfa.ca.gov/lbam](http://www.cdfa.ca.gov/lbam), then go to "Environmental Impact Report (PEIR)."

Source: CDFA

## **Q2: What is the disposal method of the twist ties?**

**A:** CDFA follows label instructions in disposing of product and product containers. The [LBAM Plus label](#) states that empty dispensers and foil packets can be placed in the trash.

Source: CDFA

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### **Q3: What is the impact on bees? (twist ties)**

**A:** The use of twist ties does not have an impact on bees. The product is not toxic to LBAM or other insects, including bees. Its function is to disrupt the mating of LBAM.

Source: CDFA

### **Q4: How many ties per tree are planned?**

**A:** Twist ties are applied at the rate of 250 ties per acre. The crews deploy the ties as evenly as possible in trees. The exact number per tree is dependent on the number and height of the trees in the yard.

Source: CDFA

### **Q5: Alternatives: If you know what they are, why not use them?**

**A:** The CDFA and USDA are developing several alternative strategies to eradicate the LBAM from California. Both agencies are jointly working on natural enemies to suppress population numbers. Both agencies are jointly working on sterile insect technique to eradicate LBAM populations by saturating the environment with sterile moths. Both agencies are working on use of organic certified oils and insecticides in plant nurseries. All of these alternatives have their strengths and weaknesses, and the agencies incorporate them where and when appropriate to eradicate the LBAM.

Source: CDFA

### **Q6: Can you assure that there are no effects to humans who come in contact with twist ties? How have you determined this?**

**A:** As with any and all pest eradication programs, public safety is our top priority. Pheromone dispensers, registered since 1991 in the U.S., have been used in the management of codling moths worldwide and in Australia where LBAM was first detected. No adverse effects have been associated with their use.

The twist ties contain pheromones that are structurally similar to those produced naturally by the female moth. Pheromones do not kill any living organisms and they do not even harm the moth. The pheromones have

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been tested for potential toxicity and have been found to be practically non-toxic to mammals. The twist ties release pheromones into the air very slowly over several months. The low exposure and low toxicity of the pheromones make any potential health effects unlikely. Exposure to the inert ingredients is very low. The use of pheromones for mating disruption is one of the safest methods for controlling pests.

Although no effects are expected with human contact, as a precaution for handling, we suggest that individuals avoid contact with skin and eyes (similar standard precautions are used with many common house and garden products).

Source: OEHHA

### **Q7: Has the public been informed of hazards of twist ties?**

**A:** Twist ties have been evaluated for safety and are not expected to pose a health hazard. Relevant information has been provided in public meetings held in many counties, including Sonoma County. Information has also been provided to local residents during visits to their homes, by county and state officials. Information has also been provided by telephone in response to inquiries.

Source: OEHHA

### **Q8: According to some reports, the use of non-toxic pheromone-baited hanging sticky traps is a more effective method of reducing LBAM populations. Why was the use of twist ties chosen over the sticky traps?**

**A:** Use of traps as a method of eradication was extensively discussed with the LBAM Technical Working Group (TWG). The TWG concluded that mass trapping is not an effective eradication strategy. Their comments can be found in a letter dated May 2, 2008, entitled "Light Brown Apple Moth Science Update" on the CDFA's Light Brown Apple Moth website at: [http://www.cdfa.ca.gov/phpps/pdep/lbam/pdfs/ETF/TWG\\_response\\_to\\_HOP\\_E\\_plan.pdf](http://www.cdfa.ca.gov/phpps/pdep/lbam/pdfs/ETF/TWG_response_to_HOP_E_plan.pdf)

Source: CDFA

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**Q9: If twist ties are used, how long will twist ties remain in place for Sonoma?**

**A:** The CDFA and USDA joint protocol for the use of twist ties is to keep them in place for two generations of the LBAM. This duration is adequate to prevent mating and causing the LBAM population to crash in area that are not heavily infested with LBAM. However, the length of a life cycle is temperature dependent so the time for two life cycles can range from 45 days to six months, depending upon local weather conditions. The CDFA monitors local ambient temperatures closely and works with scientifically accepted temperature models to project the LBAM life cycles.

Source: CDFA

**Q10: Why isn't yard waste being quarantined?**

**A:** The movement of yard, or green, waste out of the LBAM quarantine area is regulated. Anyone moving green waste out of a quarantine area must operate under what is called a compliance agreement that requires him or her to deliver the green waste only to approved receiving facilities outside of the quarantine area. The approved receiving facilities must operate under a CDFA permit that prohibits them from receiving LBAM green waste from anyone in a quarantine area not under a compliance agreement. The CDFA permit also requires the receiving facility to process the green waste in an approved manner.

Source: CDFA

**Q11: Why are LBAM Plus twist ties classified as a pesticide?**

**A:** A pesticide, according to both federal and state law, is defined as any substance or mixture of substances intended for preventing, destroying, repelling or mitigating any pest. A pheromone used for mating disruption is classified as a pesticide because it prevents the moth from being able to mate, thus reducing or eliminating its existence.

Source: CDFA

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### **Q12: Why not use biological control rather than eradication?**

**A:** The CDFA and USDA are working together to develop biological control agents for the LBAM. CDFA scientists are working to develop the use of commercially available *Trichogramma* wasps to control LBAM in the egg stage. CDFA and USDA are also working with scientists in Australia and New Zealand to identify potential biological control agents in these countries that might be applicable to California. They are also working to identify native parasites and predators of the LBAM. However, biological control agents go through a rigorous testing and screening process before the USDA can approve them for use in the field. In addition, biological control is a great tool for suppressing pest populations, but not for eradicating them. Nonetheless, CDFA and USDA are working to discover and develop biological control as a suppressive tool in areas of high LBAM populations in order to supplement eradication strategies.

Source: CDFA

### **Q13: How long has LBAM been here?**

**A:** The first LBAM was detected in California in late 2006. Based on subsequent statewide trapping results and plant movement investigations, it is evident that the primary mode by which LBAM is spread is via the movement of nursery stock. USDA and CDFA invasion biologists, based on a "coalescing colony" predictive model, have estimated that LBAM has been in California for no more than five to six years. There is no evidence to support a finding that LBAM has been in California for 30 to 50 years.

Source: CDFA

### **Q14: What's the urgency if only two LBAM are found?**

**A:** The trigger to start an LBAM eradication program is the discovery of two moths trapped within a distance of three miles of each other during the time frame of one life cycle. This trigger is designed to find and eradicate infestations when they are very small and can be easily eradicated.

Source: CDFA

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**Q15: In New Zealand, they do "spot treatments" when 30 LBAM are found. What is the urgency?**

**A:** The LBAM is permanently established in New Zealand. New Zealand agriculturalists use "spot treatments" to control localized outbreaks of LBAM in order to produce an economically viable crop. This is consistent with good control strategy. The CDFA/USDA eradication strategy seeks the elimination of all LBAM populations in California. It is important to eliminate this pest from California before it becomes permanently established.

Source: CDFA

**Q16: It has been estimated that there are two-thousand host plants for LBAM; how was this determined?**

**A:** The USDA used various sources and its Global Pest and Disease Database to compile a worldwide host list. It listed 290 genera that contained at least one species that was identified as a host, and this list was extrapolated to predict a potential list of 2,042 species by including all species in each genus as likely hosts. This list includes 16 genera that contain 48 California plant species, which are state or federally listed as rare, threatened or endangered. The food plants for nine California state or federally listed threatened or endangered insects are also listed as hosts.

Source: CDFA

**Q17: What risk does the LBAM pose to California?**

**A:** The LBAM is a new arrival to California; therefore, widespread, visible plant and crop damage is not expected at this time. LBAM is feeding on the leaves of a wide array of plants in the infested areas. Populations of LBAM are currently concentrated in urban areas - not agricultural areas - so relatively little cropland has been exposed to high numbers of LBAM. This will change if LBAM is allowed to move into areas planted with perennial crops, such as grapes, apples, pears, peaches, kiwifruit, etc. We are beginning to see caterpillars show up in harvested berries. We expect damage levels to increase as the LBAM populations increase. Increased use of pesticides by regulated industries and the general public to manage LBAM populations will have a negative impact on the environment as well.

Source: CDFA

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**Q18: What is the timeline for statewide eradication using the sterile moth?**

**A:** Sterile moths will be released starting with small, targeted areas in 2009, with full implementation in 2011. Eradication is expected by 2015.

Source: CDFA

**Q19: What is the determination regarding endangered species by Fish & Wildlife, and will it be made public once determined?**

**A:** The U.S. Fish and Wildlife Service and the National Marine Fisheries have concurred that the setback distances and other precautions being taken by the CDFA in the use of twist ties are adequate to protect threatened and endangered species in the Sonoma County twist tie application area. Their findings were submitted to members of the Board on August 13, 2008.

Source: CDFA

**Q20: Will any substance be applied to the sterile moths?**

**A:** The moths will be marked so that they can be distinguished from non-sterile moths. A fluorescent dye powder is applied to the moths before release. These dyes have been used for over 30 years in California to mark other sterile insects released over both urban and rural areas, such as Mediterranean fruit fly, Mexican fruit fly and pink bollworm.

Source: CDFA

**Q21: Will sterile LBAM eat plants?**

**A:** Sterile adult moths will be released. The adult LBAM do not feed and will not damage plants. The LBAM caterpillar is the life stage that eats plants.

Source: CDFA